

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application:

Claim 1 (Currently Amended): A liquid crystal optical element, comprising:
a pair of substrates with transparent electrodes; and
a liquid crystal layer having a memory property interposed between the substrates;
~~and having a memory property;~~
~~wherein~~ a first resin layer which is provided on at least one of the transparent electrodes,
said first resin layer having a rubbed vertical alignment surface of said first resin layer
~~is arranged to be~~ in contact with the liquid crystal layer.

Claim 2 (Original): The liquid crystal optical element according to Claim 1, wherein the first resin layer is provided only on the substrate on a side opposite to an observing side.

Claim 3 (Original): The liquid crystal optical element according to Claim 1, wherein the other electrode has a second resin layer provided thereon, the second resin layer is provided in contact with the liquid crystal layer, and the second resin layer has a surface hardness of B or less in a pencil hardness test.

Claim 4 (Original): The liquid crystal optical element according to Claim 2, wherein the other electrode has a second resin layer provided thereon, the second resin layer is provided in contact with the liquid crystal layer, and the second resin layer has a surface hardness of B or less in a pencil hardness test.

Claim 5 (Currently Amended): A liquid crystal optical element, comprising:
a pair of substrates with transparent electrodes; and
a liquid crystal layer having a memory property interposed between the substrates ~~and~~
~~having a memory property;~~ ;

~~wherein at least one of the transparent electrodes has a metal-oxide layer provided~~
~~thereon, on at least one of the transparent electrodes, and the said metal-oxide layer is~~
~~provided being in contact with the liquid crystal layer;~~

a first resin layer which is provided on at least one of the transparent electrodes,
said first resin layer having a rubbed vertical alignment surface in contact with the
liquid crystal layer.

Claim 6 (Original): The liquid crystal optical element according to Claim 5, wherein
the paired transparent electrodes have a drive voltage of 20V or less applied thereacross.

Claim 7 (Original): The liquid crystal optical element according to Claim 5, wherein
the other electrode has a second resin layer provided thereon, the second resin layer is
provided in contact with the liquid crystal layer, and the second resin layer has a surface
hardness of B or less in terms of a pencil hardness test.

Claim 8 (Original): The liquid crystal optical element according to Claim 6, wherein
the other electrode has a second resin layer provided thereon, the second resin layer is
provided in contact with the liquid crystal layer, and the second resin layer has a surface
hardness of B or less in a pencil hardness test.

Claim 9 (New): The liquid crystal optical element according to Claim 1, which is a chiral nematic liquid crystal optical element.

Claim 10 (New) The liquid crystal optical element according to Claim 1, wherein said liquid crystal layer exhibits a planar state and a focal conic state.

Claim 11 (New) The liquid crystal optical element according to Claim 10, wherein said focal conic state produces a scattering of incident light.

Claim 12 (New) The liquid crystal optical element according to Claim 10, wherein said planar state produces a selective reflection of incident light.

Claim 13 (New) The liquid crystal optical element according to Claim 1, which is a color display.

Claim 14 (New) The liquid crystal optical element according to Claim 3, wherein said second resin layer comprises a polyimide which has been baked.

Claim 15 (New) The liquid crystal optical element according to Claim 3, further comprising an electrically insulating layer which is coated on said electrode and wherein said first and said second resin layer are coated on said electrically insulating layer.

Claim 16 (New) The liquid crystal optical element according to Claim 3, wherein said second resin layer is not subjected to an alignment treatment by rubbing.

Claim 17 (New) The liquid crystal optical element according to Claim 1, wherein said second resin layer prevents image-sticking.

Claim 18 (New) The liquid crystal optical element according to Claim 1, wherein the liquid crystal layer exhibits reflection characteristics as if the liquid crystal layer is a mirror.

Claim 19 (New) The liquid crystal optical element according to Claim 7, wherein said second resin layer comprises a polyimide which has been baked.

Claim 20 (New) The liquid crystal optical element according to Claim 7, further comprising an electrically insulating layer which is coated on said electrode and wherein said first and said second resin layer are coated on said electrically insulating layer.

Claim 21 (New) The liquid crystal optical element according to Claim 7, wherein said second resin layer is not subjected to an alignment treatment by rubbing.

Claim 22 (New) The liquid crystal optical element according to Claim 5, wherein said second resin layer prevents image-sticking.

Claim 23 (New) The liquid crystal optical element according to Claim 5, wherein the liquid crystal layer exhibits reflection characteristics as if the liquid crystal layer is a mirror.

Claim 24 (New) The liquid crystal optical element according to Claim 5, wherein said liquid crystal layer exhibits a planar state and a focal conic state.

BASIS FOR THE AMENDMENT

Claims 1 and 5 have been amended as supported at page 23, lines 22-26.

New Claims 9-24 have been added.

New Claim 9 is supported at page 1, lines 23-25.

New Claim 10 is supported at page 1, last paragraph.

New Claim 11 is supported at page 1, last paragraph.

New Claim 12 is supported at page 1, last paragraph.

New Claim 13 is supported at page 2, lines 16-17.

New Claim 14 is supported at page 18, lines 19-21.

New Claim 15 is supported at page 25, lines 14-16.

New Claim 16 is supported at page 18, lines 13-15.

New Claim 17 is supported at page 16, lines 10-13.

New Claim 18 is supported at page 24, line 7.

New Claim 19 is supported at page 18, lines 19-21.

New Claim 20 is supported at page 25, lines 14-16.

New Claim 21 is supported at page 18, lines 13-15.

New Claim 22 is supported at page 16, lines 10-13.

New Claim 23 is supported at page 24, line 7.

New Claim 24 is supported at page 1, last paragraph.

No new matter is believed to have been added by entry of this amendment. Entry and favorable reconsideration are respectfully requested.

Upon entry of this amendment Claims 1-24 will now be active in this application.

INTERVIEW SUMMARY

Applicants wish to thank Examiner Duong for the helpful and courteous discussion with Applicants' Representative on November 18, 2003. During this discussion it was noted that it is improper to combine Tanaka et al with JP 08-220326. Tanaka et al disclose a LCD (abstract). However, there is no second resin layer having a surface hardness of B or less. JP 08-220326 discloses a color filter in which an adhesive layer is a polyimide resin having a hardness of <HB (abstract). The adhesive layer is used to improve **adhesion** between a transparent protective layer and a light shielding layer or a substrate. However, this reference has nothing whatsoever to do with a liquid crystal display. Inclusion of the color filter of JP 08-220326 in the LCD of Tanaka et al does not result in the claimed invention.